CORONA

19 June 1969

MEMORANDUM

SUBJECT: Estimate of Ability of Remaining CORONAs to Meet Search/Surveillance Requirements

1. This memorandum is for information on the assumption that there is discussion of the CORONA program at the ExCom meeting on 20 June. It shows that the adequacy of the CORONA program to meet USIB-approved search requirements may be adversely affected if Ultra-thin Base film cannot be used.

2. The schedule for CORONA as currently presented by the NRO provides for twelve more launches or three vehicles in each six-month period beginning July 1969 through June 1971.* The first vehicle is a CORONA 4B (1107) and will carry Standard Base film. Except for KH-4A Mission 1052, scheduled for September 1969, the remaining vehicles will be the KH-4B configuration. This configuration cannot carry as much Standard Base film as the KH-4A, but it is planned to make up for this deficiency by using Ultra-thin Base film. UTB in the 4B provides the capability to obtain approximately one-third more coverage per mission than does Standard Base. There is some question, however, about the quality of the imagery that may be obtained by the KH-4B using Ultra-thin Base film.

3. The USIB-approved search requirement calls for coverage of "about 80-90% of the built-up area" of the bloc each six months. This requirement has been met on occasion, but many times our coverage has fallen to 60-70% without harmful consequence.

*The last two, 1116 and 1117, are listed as reserves.

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4. While advance calculations of coverage cannot be precise, I have reviewed the CORONA schedule in light of experience obtained during calendar year 1968, and conclude that, if UTB proves workable and if CORONA 4B mission reliability remains high, we should accomplish search of about 70% of the built-up portion of the Sino-Soviet area each six months and will meet or nearly meet other search/surveillance requirements. This estimate assumes: (a) modest increase in days on orbit per mission, (b) modest reduction in the area searched as a result of re-definition of the built-up area, (c) mapping and charting coverage can be reduced, (d) crises requiring an increased launch tempo will not occur, and (e) the use of the new operational program in CORONA. Finally, if the above assumptions and conditions are correct 25X1 25X1 there will be one regularly scheduled and two reserve CORONAs available for overlap, or sufficient to cover a six-month period.

5. Should it not be feasible to use UTB in the last ten CORONA 4B vehicles, then our search coverage might fall as low as 55% of the built-up area of the bloc each six months. Clearly the adequacy of the CORONA program is sensitive to the availability of the UTB film. 59% FY70 54% FY71

6. Based on the analysis described above, the CORONA program could be stretched an additional six months only if our search coverage were reduced to about 65% of the built-up area of the bloc each six months (assuming UTB) or about 50% each six months with Standard Base film.

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Chairman
Committee on Imagery Requirements and Exploitation

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